



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,306	06/20/2005	Michael O'Rourke	084329-000000US	6397

20350 7590 06/09/2009  
TOWNSEND AND TOWNSEND AND CREW, LLP  
TWO EMBARCADERO CENTER  
EIGHTH FLOOR  
SAN FRANCISCO, CA 94111-3834

EXAMINER
----------

SCHILLINGER, ANN M

ART UNIT	PAPER NUMBER
----------	--------------

3774

MAIL DATE	DELIVERY MODE
-----------	---------------

06/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,306	<b>Applicant(s)</b> O'ROURKE ET AL.	
	<b>Examiner</b> ANN SCHILLINGER	<b>Art Unit</b> 3774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/24/09, 5/28/09</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 8-10, 18-24, and 27 are rejected under 35 U.S.C. 103(a) as being anticipated by Wellman et al. (US Pub. No. 2003/0065303). Wellman et al. teaches the following of the claimed invention: a method of treating a stiffened blood vessel to help it resume normal function, said method comprising at least substantially encasing a stiffened portion of said blood vessel with an elastic membrane formed of biocompatible material (52; para. 0041-0042) such that said membrane engages said stiffened portion of said blood vessel to thereby reduce the external diameter of said stiffened portion of said blood vessel (para. 0025-0026). The membrane may act on an artery (para. 0026), and the method may be carried out thoracoscopically (para. 0016). The reference is silent as to the properties of size and stiffness, as claimed by the Applicant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the prosthesis with the claimed physical characteristics, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Khanghani et al. (US Pat. No. 6,984,201). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach placing the device on an artery

Art Unit: 3774

such as the ascending aorta. Khanghani et al. teaches a blood circulation device on the ascending aorta in col. 9, lines 8-29 for the purpose of properly maintaining the heart's bloodflow.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the device of Wellman et al. on the ascending aorta in order to properly maintain the heart's bloodflow.

Claims 5, 6, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Chuter (US Pat. No. 5,387,235). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach constructing the device from a graft of woven polyester. Chuter teaches a stent with a woven polyester graft in col. 9, lines 12-43 for the purpose of utilizing the material's elasticity. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by constructing it from a graft of woven polyester in order to utilize the material's elasticity.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Von Oepen (US Pub. No. 2002/0151959). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach dilating the vessel prior to treatment. Von Oepen teaches a stent where the vessel is dilated prior to treatment in paragraphs 0001-0002 for the purpose of preventing the vessel from closing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Wellman et al. by dilating the vessel prior to treatment in order to prevent the vessel from closing.

Art Unit: 3774

Claims 11, 12, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Barefoot et al. (US Pat. No.3,726,279). Regarding claims 11, 12, and 14, Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach using sutures or a clamp on the ends of the prosthesis. Barefoot teaches a vascular cuff with sutures (27) and a clamp (30; Fig. 9) for the purpose of securing the prosthesis in its desired shape. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by using sutures or clamps on the ends of the prosthesis in order to secure the prosthesis in its desired shape.

Regarding claim 17, Wellman et al. does not teach using the prosthesis having a spiral shape. Barefoot teaches a vascular cuff with a spiral shape as shown in Fig. 6 for the purpose of covering a longer area of the vessel. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by giving the prosthesis a spiral shape in order to cover a longer area of the vessel. In addition it has been held that a change in shape is within the scope of one having ordinary skill in the art.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Spaulding (US Pat. No. 5,304,200). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach welding the ends of the prosthesis. Spaulding teaches a stent with welded ends in col. 5, lines 13-49 for the purpose of securing the prosthesis in its desired shape. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by welding the ends of the prosthesis in order to secure the prosthesis in its desired shape.

Art Unit: 3774

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Jones (US Pat. No. 4,202,349). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach markings on the prosthesis. Jones teaches a stent with markings in col. 2, line 52 through col. 3, line 16 for the purpose of helping the physician to properly locate the prosthesis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by placing markings on the prosthesis in order to help the physician to properly locate the prosthesis.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Dusbabek et al. (US Pub. No. 2001/0007082). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach how the sheet membrane is formed. Dusbabek et al. teaches a stent where a cylinder is cut to form different structures to be used with the prosthesis in paragraphs 0074-0076 for the purpose of allowing the user to create the desired shape for the prosthesis. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by using a cut cylinder to form different structures to be used with the prosthesis in order to allow the user to create the desired shape for the prosthesis.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wellman et al. in view of Silverstrini et al. (US Pat. No. 4,834,755). Wellman et al. teaches the invention substantially as claimed, however, Wellman et al. does not teach using elastic polyurethane in the prosthesis. Silverstrini et al. teaches a biological prosthesis using elastic polyurethane in columns 5 and 6 for the purpose of utilizing the material's biocompatibility.

Art Unit: 3774

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Wellman et al. by using elastic polyurethane in the prosthesis in order to utilize the material's biocompatibility.

***Response to Arguments***

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANN SCHILLINGER whose telephone number is (571)272-6652. The examiner can normally be reached on Mon. thru Fri. 9 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on (571) 272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S./  
Examiner, Art Unit 3774

/William H Matthews/  
Primary Examiner AU 3774

Application/Control Number: 10/540,306

Page 7

Art Unit: 3774